UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,069	02/05/2004	Emrys Williams	5681-74900	6049

58467   7590   02/19/2009
MHKKG/SUN
P.O. BOX 398
AUSTIN, TX 78767

EXAMINER
MORAN, RANDAL D

ART UNIT	PAPER NUMBER
2435	

MAIL DATE	DELIVERY MODE
02/19/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/773,069	WILLIAMS, EMRYS
	Examiner	Art Unit
	RANDAL D. MORAN	2435

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2008*.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36, 38-52 and 54* is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-36, 38-52, and 54* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All   b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)   Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Claims 1-36, 38-52, and 54 are pending.

This Office Action is in response to arguments filed 10/31/2008.

Below, Examiner has pointed out particular references contained in the prior

art(s) of record in the body of this action for the convenience of the applicant. Although

the specified citations are representative of the teachings in the art and are applied to

the specific limitations within the individual claims, other passages and figures may

apply as well. Applicant should consider the entire prior art as applicable as to the

limitations of the claims. It is respectfully requested from the applicant, in preparing the

response, to consider fully each reference in its entirety as potentially teaching all or

part of the claimed invention, as well as the context of the passage as taught by the

prior arts or disclosed by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

1.   **Claims 1-16, 18-33, and 35-53** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Hoover (US 6,209,102)**, hereafter "Hoover".

Considering **Claims 1 and 35,** Hoover discloses a method of accepting a pass code (abstract), comprising: providing a user with a machine-generated challenge (column 2- lines 44-46); and receiving, from a user-input device, user input that transforms the machine-generated challenge into a pass code allocated to the user (column 2- lines 47-52), wherein the user input is dependent on the machine-generated challenge such that the user input to transform the machine-generated challenge into the pass code is different for different machine generated challenges (column 3- lines 11-19); generating a response to the challenge from the user input received from the user input device (column 4- lines 34-36), said response allowing the user to be validated against a stored data record of the pass code (column 4- lines 34-36). Hoover does not explicitly disclose transmitting the response to a remote authorization unit to authenticate the response without transmitting the pass code to the remote authorization unit and without generating the pass code from the response prior to said transmitting. Hoover suggests that the user would input to an adjacent row an offset digit sequence such that the correct PIN digit sequence was formed when the offset digit sequence row was added to the initially random PIN digit sequence row (column 2- lines 56-61).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to transmit the offset digit sequence without transmitting the actual pass code for the benefit of protecting a user's PIN, password, or other access code, from disclosure to an attacker who, directly or indirectly, obtains the sequence of characters inputted by a user to gain access to a transaction (Hoover- column 1- lines 57-60).

Considering **Claims 18, 36, and 38,** Hoover discloses a terminal for use in accepting a pass code (abstract), comprising: an output for providing a user with a machine generated challenge (column 2- lines 44-46); a user input device for receiving user input that transforms the challenge into a pass code allocated to the user (column 2- lines 47-52), wherein the user input is dependent on the machine-generated challenge such that the user input to transform the machine-generated challenge into the pass code is different for different machine generated challenges (column 3- lines 11-19), generate a response to the challenge from the user input received from the user input device, said response allowing the user to be validated against a stored data record of the pass code; and transmitting the response to a remote authorization unit to authenticate the response (column 2- lines 56-61).

Hoover does not explicitly disclose without transmitting the pass code to the remote authorization unit and without generating the pass code from the response prior to said transmitting. Hoover suggests that the user would input to an adjacent row an offset digit sequence such that the correct PIN digit sequence was formed when the offset digit sequence row was added to the initially random PIN digit sequence row (column 2- lines 56-61).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to transmit the offset digit sequence without transmitting the actual pass code for the benefit of protecting a user's PIN, password, or other access code, from disclosure to an attacker who, directly or indirectly, obtains the sequence of characters inputted by a user to gain access to a transaction (Hoover- column 1- lines 57-60)

Considering **Claims 2, 19, and 39,** Hoover discloses challenge is independent of said pass code (column 3- lines 11-17).

Considering **Claims 3, 20, and 40,** Hoover discloses generating a new challenge for each user validation (column 3- lines 13-16).

Considering **Claims 4, 21, and 42,** Hoover discloses challenge is generated on a random basis (column 3- lines 13-16).

Considering **Claims 5, 22, and 41,** Hoover discloses challenge is generated in response to receiving a request from a user for validation (column 1- lines 1-14, column 3- lines 11-12, column 4- lines 17-18, it is inherent that for access to an electronic service, a request for authorization would be received (i.e. access to an ATM or the like)).

Considering **Claims 6, 23, and 43,** Hoover discloses providing a user with a challenge comprises displaying the challenge to the user (column 2- lines 44-46).

Considering **Claims 7, 24, and 44,** Hoover discloses the challenge is displayed to the user in such a manner as to prevent third parties from viewing the challenge (column 3- lines 1-10).

Considering **Claims 8, 25, and 45,** Hoover discloses the response from the user is received as a set of one or more modifications to be applied to the challenge so that it matches the pass code allocated to the user (column 2- lines 44-52).

Considering **Claims 9, 26, and 46,** Hoover discloses the set of one or more modifications is received as directional input from the user (column 2- lines 50-52).

Considering **Claims 10, 27, and 47,** Hoover discloses the directional input is received as the result of the user pressing one or more arrow keys that increment or decrement the challenge by a fixed amount (column 2- lines 50-52).

Considering **Claims 11, 28, and 48,** Hoover discloses challenge has the same number of characters as the pass code allocated to the user (column 2- lines 47-48).

Considering **Claims 12, 29, and 40,** Hoover discloses transformation is specified individually for each character of the challenge (column 2- lines 48-52).

Considering **Claims 13, 30, and 50,** Hoover discloses receiving an indication from the user that the transformation for a different character is about to be entered (column 2- lines 48-52).

Considering **Claims 14, 31, and 51,** Hoover discloses receiving an indication from the user that the response has been completely entered (Fig. 2- Submit).

Considering **Claims 15, 32, and 52,** Hoover discloses generating an entered pass code from the challenge and from the response (column 3- lines 11-19).

Considering **Claims 16, 33, and 53,** Hoover discloses the response is validated by comparing the generated pass code with the stored data record of the pass code (column 1- lines 6-14).

2.   **Claims 17, 34, and 54** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hoover** in view of **Funk (US 5,721,779),** hereafter "Funk".

Considering **Claims 17, 34, and 54,** Hoover discloses receiving a communications challenge from the remote authorization unit that has access to said stored data record of the pass code (column 1- lines 6-14, column 2- lines column 44-

47); thereby allowing the response input by the user to be validated by said

authorization unit against said stored data record of the pass code (column 4- lines 34-

36).

Hoover is silent on using the response to encrypt said communications challenge; and

transmitting the encrypted communications challenge to the remote authorization unit,

thereby allowing the response input by the user to be validated by said remote

authorization unit using said stored data record of the pass code.

Funk discloses using the response to encrypt said communications challenge (Funk-

column 4- lines 50-52); and transmitting the encrypted communications challenge to the

authorization unit (Funk- column 4- lines 66-67), thereby allowing the response input by

the user to be validated by said authorization unit against said stored data record of the

pass code (Funk- column 4- line 67, column 5- lines 34-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the teachings of Hoover by using the response

to encrypt said communications challenge; and transmitting the encrypted

communications challenge to the authorization unit as taught by Funk for the benefit of

enforcing link security for the communication link between the client and the server

(Funk- column 3- lines 24-26).

Response to Arguments

Applicant's arguments filed 10/31/2008 have been fully considered but they are

not persuasive.

Regarding **Claim 1,** applicants arguments have been fully considered but are not persuasive. With respect to applicants argument that Hoover fails to teach *without generating the passcode from the user prior to said transmitting,* applicant is directed to Hoover- column 2- lines 44-53. Hoover discloses a user being presented a random 6-digit number which must be transformed into the passcode. The passcode is never entered by the user, the user simply increments the digits by a +1 or -1 but never actually enters the passcode.

Regarding **Claim 17,** applicants arguments have been fully considered but are not persuasive. With respect to applicants argument that the combination fails to teach *using the response to encrypt said communications challenge; and transmitting the encrypted communications challenge to the remote authorization unit, thereby allowing the response input by the user to be validated by said remote authorization unit using said stored data record of the pass code,* applicant is directed to Funk- column 9- lines 50-52. Funk is used to show encryption and is not used to show the transmission of the response. As shown in the rejection of Claim 1, it would have been obvious to one of ordinary skill in the art at the time of the invention to transmit the offset digit sequence without transmitting the actual pass code for the benefit of protecting a user's PIN, password, or other access code, from disclosure to an attacker who, directly or indirectly, obtains the sequence of characters inputted by a user to gain access to a transaction (Hoover- column 1- lines 57-60)

Regarding **Claim 36,** applicants arguments have been fully considered but are not persuasive. From the examiners point of view, Claim 36 contains no limitations not already present in the concurrently rejected claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randal D. Moran whose telephone number is 571-270-1255. The examiner can normally be reached on M-F: 7:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. D. M./
Examiner, Art Unit 2435
2/12/2009
/Kimyen Vu/
Supervisory Patent Examiner, Art Unit 2435